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## **Supplemental Material**

### **Ambient PM<sub>2.5</sub>, O<sub>3</sub>, and NO<sub>2</sub> Exposures and Associations with Mortality over 16 Years of Follow-Up in the Canadian Census Health and Environment Cohort (CanCHEC)**

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**Table S2.** Associations between mortality from non-accidental deaths and PM<sub>2.5</sub>, O<sub>3</sub>, and NO<sub>2</sub>, and effect modification by selected characteristics. All models stratified by age and sex, adjusted for personal and contextual covariates; hazard ratios for PM<sub>2.5</sub> per 10 µg/m<sup>3</sup>, hazard ratios for O<sub>3</sub> and NO<sub>2</sub> per 10 ppb.

**Table S3.** Associations between mortality from cardio-metabolic diseases and PM<sub>2.5</sub>, O<sub>3</sub>, and NO<sub>2</sub>, and effect modification by selected characteristics. All models stratified by age and sex, adjusted for personal and contextual covariates; hazard ratios for PM<sub>2.5</sub> per 10 µg/m<sup>3</sup>, hazard ratios for O<sub>3</sub> and NO<sub>2</sub> per 10 ppb.

**Table S4.** Hazard ratios (and 95% confidence intervals) for mortality by pollutant in single- and multi-pollutant models: models stratified by age and sex, adjusted for personal and contextual

covariates; indirectly adjusted for smoking and obesity; hazard ratios per mean-5th percentile (i.e., 5.0  $\mu\text{g}/\text{m}^3$ , 9.5 ppb, and 8.1 ppb increases in  $\text{PM}_{2.5}$ ,  $\text{O}_3$ , and  $\text{NO}_2$ , respectively).

**Figure S1.** Comparison of satellite-derived estimates of  $\text{PM}_{2.5}$  (median 1998-2006) with observations from fixed-site stations (mean 1984-2006) in 10 Canadian cities.

**Figure S2.** Maps of exposures as assigned to subjects; insets for Vancouver, Toronto, and Montreal.

**Figure S3.** Concentration response plots for mortality by pollutant in single-pollutant models: models stratified by age and sex, adjusted for personal and contextual covariates. a)  $\text{PM}_{2.5}$  (mean: 8.9  $\mu\text{g}/\text{m}^3$ ; knots: 3.9, 8.6, 14.4  $\mu\text{g}/\text{m}^3$ ). b)  $\text{O}_3$  (mean: 39.6 ppb; knots: 30.0, 38.9, 50.7 ppb). c)  $\text{NO}_2$  (mean: 11.6 ppb; knots: 3.1, 9.8, 23.4 ppb).